Woylie woes continue despite reproductive success

June 10 2015, by Brooke Hunter

"The woylies have an amazing ability to reproduce and produce young but when I started this project in 2010, there were four sub populations in the wild and now there are only three," he says. Credit: Craig Thompson

Despite recent recovery efforts and substantial reproductive potential in the south west brush-tailed bettong (Bettongia penicillata) numbers continue to decline in the wild due to predators and parasites.

Department of Parks and Wildlife and Murdoch University staff are currently monitoring the critically endangered species—also known as a woylie—in the predator-free Perup Sanctuary near Manjimup and at Native Animal Rescue in Malaga.

The research team, including former Murdoch University PhD student Dr Craig Thompson, supervisors Professor Andrew Thompson, Dr Stephanie Godfrey and DPaW's Dr Adrian Wayne captured the animals once a month at Native Animal Rescue over 22 months to collect blood.

Published in late January, Dr Thompson's PhD chapter entitled Survival, age estimation and sexual maturity of pouch young of the brush-tailed bettong (Bettongia penicillata) in captivity, outlines how the researchers analysed hundreds of blood samples looking for parasites to determine how protozoans might affect relocation success.

But Dr Thompson says the study design allowed them to monitor additional reproductive data at the same time.

"I was capturing these animals and monitoring them to see any signs of diseases or change with the parasites," he says.

"However, I was also able to collect reproductive data from these animals because no one else had done it like this before.

Majority of females caring for young

Dr Thompson says the team observed 96 per cent of the time the female woylie was caring for young, with signs of pouch young or young groomed to be independent.

"The woylies have an amazing ability to reproduce and produce young but when I started this project in 2010, there were four sub populations

in the wild and now there are only three," he says.

"This reproductive success added fuel to the fire of why the woylies continue to decline in such a bad way in the wild.

"The woylies are continuing to decline and part of my research was to understand why."

Dr Thompson's thesis additionally supports further evidence of blood parasites such as trypanosomes predisposing the woylie to an increased incidence of predation.

Monitoring shows early signs the species is responding well to recovery efforts, but that predators are still an issue.

"It doesn't look good for them in the wild," he says.

Dr Thompson's reproductive research also eventually provided scientists with a protocol of how to age young woylies in the wild.

More information: "Survival, age estimation and sexual maturity of pouch young of the brush-tailed bettong (Bettongia penicillata) in captivity" *Australian Mammalogy* 37(1) 29-38 dx.doi.org/10.1071/AM14025

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